

REMARKS

Claims 1-25 were pending in the present application. By the amendment submitted herewith, claims 15, and 17 are cancelled and claims 1-14, 16 and 18-25 are amended to particularly point out and distinctly claim certain embodiments encompassed by the invention, without acquiescence in any rejections asserted by the PTO and without prejudice to the prosecution of any surrendered subject matter in a related divisional, continuation or continuation-in-part application. Support for the present amendments may be found in the application as originally filed, for example, in claim 15 and in the specification at, *e.g.*, page 4, line 31 to page 5, line 2; page 6, lines 16-18; page 8, lines 28-29; and in the Drawings at Figures 1C, 2C, 3C, 4C, 5C, and 6C. Accordingly, no new matter is introduced by way of the present amendment.

OBJECTIONS TO THE DRAWINGS

In item 1 at page 2 of the Office Action, the PTO objects to the drawings under 37 CFR 1.83(a), alleging that not every feature of the invention specified in the claims is shown. Specifically, the PTO asserts that the mask comprising an image having a plurality of curved lines or parts thereof must be shown, as claimed in Claim 17.

Applicants traverse this objection and request its withdrawal in view of the present amendments, by which it has been rendered moot. In particular, claims 15 and 17 have been cancelled and claim 24 has been amended no longer to recite “curved lines”, such that this objection no longer applies. Reconsideration is therefore respectfully requested.

OBJECTION TO THE CLAIMS

In item 2 at page 3 of the Office Action, the PTO objects to an informality in claim 15. In view of the cancellation of claim 15 by the amendment submitted herewith, this objection is rendered moot such that its withdrawal is respectfully requested.

ALLOWABLE SUBJECT MATTER

In item 13 at page 11 of the Office Action, the PTO objects to claim 16 as being dependent upon a rejected base claim, but concedes that claim 16 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Accordingly, by the present amendment intervening claim 15, which depended from claim 1 and from which the allowable subject matter of claim 16 previously depended, has been cancelled and the features of claim 15 have been added by amendment to base claim 1. As amended, claim 16 now depends from claim 1. For reasons given herein, the applicants submit that the subject matter of claim 16 remains allowable, and that claim 16 should be allowed because it now depends from an allowable base claim, claim 1.

Briefly, the only rationale asserted by the PTO for rejecting intervening claim 15 is the allegation found in the Action at page 5, lines 1-2, and at page 8, second full paragraph, that the mask of Roenker comprises one or a plurality of curved lines. Applicants note that (i) the claims as presently amended no longer recite that the mask comprises one or a plurality of curved lines, and (ii) the claims as presently amended do recite that the mask comprises an image having at least one filled circle. Moreover, by recognizing the allowability (Action at page 11, item 13) of claim 16, which relates to a mask having filled circles, the PTO appears to concede that Roenker, alone or in combination with Teicher et al. or with Polat et al., fails to teach or suggest a mask that comprises an image having at least one filled circle. Therefore, the applicants respectfully submit that upon reconsideration of the application in view of the present amendments, claim 1 must be regarded as allowable and hence any claims that depend from patentable base claim 1 are also now in allowable form.

I. REJECTIONS UNDER 35 U.S.C. §103 OVER TEICHER ET AL. AND ROENKER ET AL.

A. Claims 1-4, 6, 7, 9, 11-15, and 17-24 stand rejected under 35 U.S.C. § 103(a) for alleged obviousness over Teicher et al. (U.S. Application No. 2004/0002636 A1) in view of Roenker et al. (U.S. Patent No. 5,801,810). The PTO asserts that Teicher et al. teach the active, recited steps (a), (c)(ii), and (d) of instant claims 1, 18, 20 and 22, and the recited steps of claims 4, 6, 7, 9, 13 and 14. The PTO concedes, however, that Teicher et al. fail to teach: (i)

masking the test stimulus by placing a mask over or in place of the entire visual test stimulus; (ii) providing information about the user's perception of a test stimulus characteristic; (iii) comparing the user profile to a reference profile and assessing cognitive impairment or visual impairment of the user; (iv) repeating the stimulus exposures for a range of predetermined exposure durations; (v) presenting a focal point stimulus to the user before presenting the visual test stimulus; (vi) the predetermined exposure duration of between 10 ms and 300 ms; (vii) the user having a choice of two different responses for responding to each test stimulus; (viii) a focal point presentation means for presenting a focal point stimulus to the user; and (ix) a mask that has an image having a plurality of curved lines.

The PTO then further alleges that Roenker et al. remedy the deficiencies of Teicher et al. Specifically, the Examiner asserts that Roenker et al. disclose a means for testing the visual attention capabilities of a subject that involves (i) masking the test entire stimulus, and which includes the use of (ix) a mask having a plurality of curved lines, citing column 4, lines 20-33 of Roenker et al., and also asserts that Roenker et al. teach features (ii)-(viii) as enumerated above. The Examiner then asserts that it would have been obvious to modify the method of Teicher et al. to include the masking technique of Roenker et al., alleging that such a combination would have provided both a means of controlling the test stimulus exposure to the subject and an accurate means of determining the response time.

Applicants respectfully traverse these grounds of rejection. The presently claimed embodiments are directed in pertinent part to a method of assessing cognitive impairment of a user comprising the steps of (a) presenting a visual test stimulus to the user for a pre-determined test stimulus exposure duration; (b) masking the test stimulus by placing a mask over or in place of the entire visual test stimulus, wherein the mask comprises an image having at least one filled circle; (c) measuring a response from the user, the response providing information about (i) the user's perception of a characteristic of the test stimulus, and (ii) a response time taken for the user to respond; (d) repeating steps (a) to (c) to develop a user profile; and (e) comparing the user profile with a reference profile, and thereby assessing cognitive impairment in the user.

In particular it is submitted that the prior art fails to teach or in any way suggest the presently claimed methods and system in which the mask used in the step of masking the test

stimulus comprises an image having at least one filled circle. Additionally, and for reasons given herein, the PTO fails to provide evidence or reasoning as to why, given Teicher et al. and Roenker et al., the skilled person would have arrived at the presently claimed subject matter with the requisite reasonable expectation of success. Moreover, and as noted above, where the PTO concedes that the subject matter of claim 16 (which relates to filled circles) would be allowable if rewritten in independent form, it is submitted that by the present amendments claims 1, 18 and 22 are in allowable form, as therefore should be any claims that depend directly or indirectly from these independent claims.

Teicher et al. disclose an invention that “relates to methods of diagnosing the presence, type, or severity of akathisia in a subject.” Teicher et al. merely teach a Continuous Performance Task (CPT) that involves presenting the subject with a series of visual stimuli and instructing the subject to *respond only to certain* “target” stimuli. According to Teicher, response times can only be measured for those target stimuli to which the subject responds, and according to the method the subject does not respond to each stimulus. The applicants note that the instant application discloses and claims a method that is quite different from, and not related to, the CPT method of Teicher et al. because, *inter alia*, the CPT of Teicher et al. requires the subject to respond only to a subset of stimuli and lacks a step of masking the test stimulus. As such, the skilled person would not have used the teachings of Teicher et al. as a starting point to be modified to arrive at the presently claimed method of assessing cognitive impairment *in which a response is measured to each stimulus*, and would not have been motivated to modify the method of Teicher et al., in which the subject responds *only to some* stimuli (*i.e.*, and not to others) from amongst those *continuously* presented (*i.e.*, without a masking step between presentation steps).

It is further respectfully submitted that these deficiencies of Teicher et al. are not remedied by Roenker et al. Roenker et al. merely disclose a means by which to rapidly assess the *visual* attention of a subject (*e.g.*, a *perceptive*, not a *cognitive* event) by presenting a sequence of visual displays to the subject for variable display times where each visual display has foveal and peripheral target images, and where error in the identification of the foveal target and the location of the peripheral target are used as a measure of visual attention capability.

Roemaker et al. disclose the use of a mask image to terminate the display of the image and to eliminate afterimages (column 4 lines 27-34). The mask image 42, shown in Figure 7 of Roemaker, comprises an array of horizontal wavy lines and does not contain at least one filled circle.

This feature of the mask, namely, that it comprises an image having at least one filled circle as recited in the instant claims according to the amendment submitted herewith, is not described or even remotely contemplated anywhere in the specification of Roemaker. As disclosed in the present application, a *mask* with this feature has particular advantages, especially when the visual *stimulus* includes one or more lines, since curves and lines have different effects on the visual system (*e.g.*, specification at paragraph 0024). Given the differences between the mask disclosed in Roemaker and the mask recited in the claims of the instant application, it is submitted that Roemaker fails to remedy the deficiencies in Teicher et al, and that the masking step as recited in the instant application would not have been obvious to one of ordinary skill in the art at the time the present invention was made.

Applicants therefore submit that the PTO has not established a *prima facie* case of obviousness. (See *In re Mayne*, 104 F.3d 1339, 1341-43 (Fed. Cir. 1997), PTO has the burden of showing a *prima facie* case of obviousness). The PTO must show that all of the claimed elements were known in the prior art, that a person skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and that the combination would have yielded nothing more than predictable results to such a skilled person. *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385. Additionally, the PTO must show that the person skilled in the art would have had a reasonable expectation of success in arriving at the claimed subject matter. M.P.E.P. § 2143.02 (citing *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986)).

In the instant case, including for reasons given above and previously made of record, it is submitted that the PTO fails to provide evidence or reasoning as to why the skilled person would reasonably have expected *successfully* to combine the recited elements. *Inter alia*, the presently recited step of masking would not reasonably have been expected to contribute to the CPT test of Teicher et al. and further relates to unpredicted advantages that derive from the

use of a mask comprising an image having at least one filled circle, a combination that is nowhere suggested in the prior art. For these and other reasons discussed herein, it is therefore submitted that the presently claimed subject matter is patentably nonobvious. Favorable reconsideration of the instant claims and withdrawal of the rejections under 35 U.S.C. §103 are respectfully requested.

Furthermore, and without acquiescing to the merits of the rejection of claims 2-4, 6, 7, 11-15, 17, 19, 21, 23 and 24, it is respectfully submitted that these claims are patentable by reason of their dependency on a patentable base claim, claim 1. Hence, the presently claimed subject matter can be readily distinguished over the prior art by virtue of the inclusion of a mask that comprises an image having at least one filled circle; further distinctions of the subject matter of the instant dependent claims are as follows: With regard to the rejections of claims 4 and 6, it is noted that Teicher et al. disclose measuring the percentage of correct responses to the target stimulus and the percentage correct passes to non-target stimulus. Further, Teicher et al. disclose the calculation of a single percentage of correct responses for all target stimuli (e.g., specification at paragraphs 0022-0023). In contrast, according to the instant embodiments it is the proportion of responses that are incorrect that is measured (claim 4), and separate mean percentages of incorrect responses (mean error rate) are calculated for each of the pre-determined test stimulus exposure durations (claim 6) (e.g., specification at paragraph 0017). In addition to their failure to contemplate a mask that comprises an image having at least one filled circle, Roenker et al. fail to remedy these deficiencies of Teicher et al.

Similarly, and with regard to instant claim 7, according to the present application separate mean response times are calculated for each of the pre-determined test stimulus exposure durations. By contrast, Teicher et al. are limited in their disclosure to calculating a single mean response time for all responses to a target stimulus (paragraph 0022) and do not suggest anything more. The invention of Teicher et al. also differs from the subject matter of claim 14 of the instant application in that Teicher et al. fail to teach or in any way suggest that each of the test stimuli may be presented for an equal number of times, as is recited in the present claim. In addition to their failure to contemplate a mask that comprises an image having at least one filled circle, Roenker et al. fail to remedy these deficiencies of Teicher et al.

With regard to instant claim 11, it is submitted that Teicher et al. and Roenker et al., whether taken alone or in combination, fail to teach or suggest a restricted range of target exposure times (“display times”) with a lower limit of 10 ms and an upper limit of 300ms as presently recited. At most, Roenker et al. disclose a lower limit of 17 ms (column 6, line 58) and also disclose examples of display times in Table 1 (column 6) and in Table 2 (column 8), in which a display time in excess of 300ms is reported. Further and in view of instant claim 12, according to Roenker et al., users enter their responses either by pressing one of eight keys on the computer keyboard to indicate the angular position of the peripheral target and one of three keys to identify the foveal target, or by vocalizing these responses; that is, the user has as few as three and as many as 11 different responses that can be made for each target display. In view of this express teaching in Roenker, it cannot be said that Roenker et al. teach the recited of present claim 12, namely, that the user has a choice of two different responses for responding to each test stimulus. With respect to instant claim 24, the feature of a mask image having a plurality of curved lines has been deleted from the claim, and for reasons discussed above, the prior art fails to teach or suggest a mask that comprises an image having one or a plurality of filled circles.

B. Claim 5 stands rejected under 35 U.S.C. § 103(a) for alleged obviousness over Teicher et al. and Roenker et al., as discussed above, and further in view of Hongo et al. (U.S. Patent No. 5,345,944). The Examiner concedes that the combination of Teicher et al. and Roenker et al. fails to explicitly disclose an error rate curve chart representing the error, but asserts that Hongo et al. remedy this deficiency, citing Figure 11 of Hongo et al. to support this assertion.

The rejection is respectfully traversed. The instant embodiment is directed to a method of assessing cognitive impairment of a user that, as discussed above, comprises in pertinent part calculating a representative error rate as recited, and wherein the user profile comprises an error rate curve charting the representative error rate, as also recited.

For reasons given above, the combination of Teicher et al. and Roenker et al. fails to teach or suggest each and every feature of the present claim, as is required for the PTO to establish *prima facie* obviousness, and as discussed herein, Hongo et al. fail to remedy the

deficiencies of Teicher et al. and Roenker et al. The PTO therefore fails to provide evidence or reasoning as to why the cited documents would have suggested to the skilled person to use a mask comprising an image having at least one filled circle in the instant method according to the claim as presently amended.

Moreover, applicants submit that Hongo et al. if anything teach away from the subject matter of the instant claims, for reasons previously made of record in applicants' submission to the PTO on December 5, 2008, reconsideration of which by the Examiner is respectfully requested. Briefly, the disclosure of Hongo et al relates to a system and apparatus for the medical diagnosis of diseases related to brain function (e.g., Alzheimer's Disease) in a user by measuring the user's eye (and preferably head) movement over an image. Hongo et al. disclose a chart showing the relation between the percentage of correct responses and the onset of masking. The applicants note by way of contrast that the error rate curve chart referred to in Claim 5 concerns the relation between incorrect responses (i.e., errors) and test stimulus exposure duration (see for example Figures 7, 9A and 10A and paragraphs 0053, 0055 and 0056). Notwithstanding this distinction, the applicants respectfully submit that claim 5 is patentable by reason of its dependency on patentable base claims, for reasons discussed herein.

Hongo et al. therefore cannot be relied upon in support of the Examiner's assertion of obviousness. The instant rejection impermissibly employs hindsight in view of the present application, where the allegation that it would have been obvious to modify the combination of Teicher et al. and Roenker et al. to include the error rate curve of Hongo et al. is expressly at odds with 35 U.S.C. §103 as interpreted by the United States Supreme Court:

According to the Supreme Court, "A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art." *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, 127 S.Ct. 1727, 82 USPQ2d 1385, 1395 (2007), No. 04-1350 4, 14, (U.S. April 30, 2007). In its assertion of the present rejection, the PTO does no more than assert that the error rate curve, i.e., merely one of the presently recited elements, was *independently* known in the art, without establishing that there was any motivation to combine it with any teachings or suggestions of Teicher and Roenker. For reasons given above, the mere combination of Teicher et al. and Roenker et al. fails to establish

prima facie obviousness of the present claims, and in any event, the PTO fails to show that the prior art contemplated the presently recited mask comprising an image having at least one filled circle, as also discussed above, for use according to the instant embodiment.

In view of the foregoing, reconsideration and withdrawal of the rejection of claim 5 under 35 U.S.C. §103 are respectfully requested.

C. Claims 8 and 25 stand rejected under 35 U.S.C. § 103(a) for alleged obviousness over Teicher et al. and Roenker et al., as described above, and further in view of Harrison et al. (U.S. Patent No. 6,317,128). The Examiner concedes that the combination of Teicher et al. and Roenker et al. fails to disclose a response rate curve, but asserts that Harrison et al. remedy this deficiency by allegedly disclosing a graphical user interface and the use of a response rate curve, citing Figure 12 of Harrison et al. to support this allegation.

Applicants respectfully traverse these grounds of rejection, including for reasons given above. Briefly, claims 8 and 25 are allowable because they depend from base claims which are patentable. Additionally, and for reasons also given above, the PTO fails to establish that the skilled person would have been motivated to modify Teicher et al. to arrive at the present subject matter, and also fails to establish that Roenker et al. remedy the numerous conceded deficiencies of Teicher et al. Further, in asserting the obviousness rejections in view of Harrison the PTO impermissibly employs hindsight in view of the present application.

The Examiner's reliance on Harrison is merely an assertion of a document that discloses graphical user interface systems, *i.e.*, a disclosure in an unrelated technical field. As such, Harrison at most may simply relate to an element that is independently known in the prior art, but absent a showing by the PTO as to why a person having ordinary skill in the art would have been motivated to combine Harrison et al. with Teicher et al. and Roenker et al., *prima facie* obviousness has not been established. Further still, the applicants note that claim 8 of the instant application refers to a specific type of response rate curve that is not contemplated by Harrison et al. Specifically, Harrison et al. fail to teach or suggest the presently recited response rate curve that charts mean response time relative to pre-determined test stimulus exposure

durations (see, for example, instant application Figures 8, 9B and 10B and paragraphs 0054-0056).

Accordingly and in view of the foregoing, it is submitted that the present claims satisfy the requirements of 35 U.S.C. §103. Reconsideration and withdrawal of the rejections are therefore respectfully requested.

D. Claim 10 stands rejected under 35 U.S.C. § 103(a) for alleged obviousness over Teicher et al. and Roenker et al., as discussed above, and further in view of Polat et al. (U.S. Patent No. 6,876,758). The Examiner concedes that the combination of Teicher et al. and Roenker et al. fails to disclose generating a reference profile either from data obtained from a reference group comprising cognitively normal individuals, or from data previously generated by the user, but asserts that Polat et al. remedy this deficiency, citing column 9, lines 22-30 of Polat et al. to support this assertion.

Applicants respectfully traverse these grounds of rejection. The deficiencies of Teicher et al., alone or in combination with Roenker et al., are discussed above and are not cured by Polat et al. Briefly, the CPT method of Teicher et al. differs dramatically from the presently recited method of assessing cognitive impairment, and the skilled person at the time of the present invention would not reasonably have expected successfully to combine Teicher et al. with Roenker et al. for reasons given above. The disclosure of Polat et al. merely relates to a system for improving a user's visual perception that is deployed for use over a communications network. Polat et al. thus may teach a test of visual perception, but Polat et al. fail to disclose such features of the present claims as masking a stimulus repeating the stimulus for a range of durations, presenting a focal point to the user before presenting the stimulus, calculating both an error rate for each stimulus and an error rate curve for the user, uniform time intervals between repetitive exposures, and a mask comprising an image having at least one filled circle. Nor has the Examiner provided any rationale as to why the skilled person would have been motivated to combine the cited documents to arrive at the presently claimed subject matter.

Contrary to the assertion found in the Action, the methods of Teicher et al. and Roenker et al. are so fundamentally different in nature and purpose that the skilled person would

not have been motivated to combine them, a deficiency not cured by Polat et al. The Examiner relies on Polat et al. for teaching the use of a reference profile generated from a cognitively normal reference group or from a user's previous data, but fails to supply any reasoning to support the combination of such a reference profile with the presently claimed methods, particularly where the PTO fails to show that any of Teicher et al., Roenker et al. and Polat et al. even remotely contemplate a mask image having at least one filled circle.

Hence, as with Hongo et al. and Harrison et al., both discussed *supra*, in the context of the present rejection the PTO does no more than assert that the reference profile of Polat et al., *i.e.*, merely one of the presently recited elements, was *independently* known in the art, without establishing that there was any motivation to combine it with any teachings or suggestions of Teicher and Roenker, and without establishing any evidence or reasoning as to how, even by combining all three cited documents, the skilled person could have reasonably expected successfully to arrive at the use of a mask image having at least one filled circle.

Accordingly and in view of the foregoing, it is submitted that the present claims satisfy the requirements of 35 U.S.C. §103. Reconsideration and withdrawal of the rejections are therefore respectfully requested.

II. REJECTIONS UNDER 35 U.S.C. §103 OVER POLAT ET AL. AND ROENKER ET AL.

A. Claims 1, 2, 3, 9-15, and 17-24 stand rejected under 35 U.S.C. § 103(a) for alleged obviousness over Polat et al. (U.S. Patent No. 6,876,758) in view of Roenker et al. (discussed *supra*). The PTO asserts that Polat et al. disclose the main features of the instant claims, but concedes that this reference fails to disclose, *inter alia*, masking the test stimulus by placing a mask over or in place of the entire visual test stimulus, or presenting a focal point stimulus to the user before presenting the test stimulus. The Examiner asserts, however, that Roenker et al. remedy the deficiencies of Polat et al., citing column 4, lines 20-58 and column 6, lines 20-54 of Roenker et al. to support this assertion. The Examiner then asserts that it would have been obvious to modify the methods of Polat et al. to include the masking and focal point stimulus techniques of Roenker et al.

Applicants respectfully traverse these grounds of rejection. The presently claimed embodiments are directed in pertinent part to a method of assessing cognitive impairment of a user, as described above. In particular it is submitted that the prior art fails to teach or in any way suggest the presently claimed methods and system in which the mask used in the step of masking the test stimulus comprises an image having at least one filled circle.

The PTO fails to provide evidence or reasoning as to why, given Polat et al. and Roenker et al., the skilled person would have arrived at the presently claimed subject matter with the requisite reasonable expectation of success. Moreover, and as discussed above, where the PTO concedes that the subject matter of claim 16 would be allowable if rewritten in independent form, it is submitted that by the present amendment claims 1, 18 and 22 are in allowable form, as therefore should be any claims that depend directly or indirectly from these independent claims.

Applicants respectfully submit that where Polat et al. fail to suggest a masking step, much less a masking step in which the mask comprises an image having at least one filled circle, the PTO fails to establish a case of *prima facie* obviousness, particularly where Roenker fails to cure the deficiencies of Polat. As noted above, the PTO concedes that Polat fails to disclose, *inter alia*, masking the test stimulus by placing a mask over or in place of the entire visual test stimulus, or presenting a focal point stimulus to the user before presenting the test stimulus. The PTO also fails to present reasoning as to why a person having ordinary skill in the art at the time the present application was filed would have been motivated to combine Polat with Roenker or with any other reference. Even assuming, *arguendo*, that such motivation existed, the shortcomings of Roenker et al. are discussed above, in particular, that Roenker et al. merely disclose a means by which to rapidly assess the visual attention of a subject by presenting a sequence of visual displays to the subject for variable display times where each visual display has foveal and peripheral target images, and where error in the identification of the foveal target and the location of the peripheral target are used as a measure of visual attention capability.

According to Roenker et al., however, the skilled person would understand that in a test of *visual attention* the mask image is used to *terminate* the display of the image and to eliminate afterimages (column 4 lines 27-34), which differs from the present methods of assessing *cognitive impairment* in which the step of masking is part of a repeated sequence of (a)

presenting, (b) masking and (c) measuring. Thus Roenker's *visual attention* test yields information about a subject's perception but not about cognition, while the present method assesses the distinct parameter of *cognitive impairment*, i.e., the user's processing of perceived signals. Also, the mask image 42, shown in Figure 7 of Roenker, comprises an array of horizontal wavy lines and does not contain at least one filled circle.

In summary, it is respectfully submitted that by the amendments submitted herewith, the instant independent claims recite a feature (image having a filled circle) of claim 16 and therefore are directed to subject matter that the PTO acknowledges is allowable, such that the related dependent claims are also now in allowable form. Furthermore, the PTO fails to meet its burden of presenting a rationale by which the skilled person would have been motivated to combine the cited documents, given the disparity between their teachings and the presently claimed subject matter. In addition, absent impermissible hindsight given the teachings of the present application, the PTO fails to establish how the skilled person could reasonably have expected predictably to combine Polat's means for *improving visual perception* with Roenker's *test of visual attention* to arrive at the claimed method for assessing *cognitive* impairment, which by its nature goes beyond the realm of mere optical sensory activity to which the cited documents are limited.

It is believed that the instant claims satisfy the requirements of 35 U.S.C. §103. Reconsideration and withdrawal of the rejections are therefore respectfully requested.

B. Claims 4 and 6-7 stand rejected under 35 U.S.C. § 103(a) for alleged obviousness over Polat et al. and Roenker et al., as described above, and further in view of Teicher et al. The Examiner concedes that the combination of Polat et al. and Roenker et al. fails to disclose (i) calculating, for each stimulus exposure duration, an error rate that represents a proportion of responses that are inaccurate, (ii) an error rate that comprises calculating a mean error, and (iii) calculating a mean response time. The Examiner asserts, however, that Teicher et al. remedy these deficiencies, citing paragraphs [0022] and [0030] of Teicher et al. to support this assertion.

These grounds of rejection are respectfully traversed, including for reasons given above with respect to the deficiencies of the cited documents when taken individually or in any combination. In particular, the instant claims depend from a base claim that, as presently amended, is believed to be allowable by virtue of its recitation of a feature that the prior art fails to teach or suggest.

Additionally, and as discussed above, Teicher et al disclose measuring the percentage of correct responses to the target stimulus and the percentage correct passes to the non-target stimulus, and teach calculating a single percentage of correct responses for all target stimuli (paragraph 0022 and 0023). In contrast, in the instant application it is the proportion of responses that are incorrect that is measured (claim 4), and separate mean percentages of incorrect responses (mean error rate) are calculated for each of the pre-determined test stimulus exposure durations (claim 6) (paragraph 0017). It was further asserted in the Action that Teicher et al. disclose calculating a *single* mean response time *for all responses* to a target stimulus (paragraph 0022). In the instant application, however, *separate* mean responses times are calculated for *each* of the pre-determined test stimulus exposure durations (claim 7), and the Action fails to set forth a rationale under which the skilled person would have found the encompassed subject matter obvious over the cited document.

Notwithstanding these distinctions, the applicants respectfully submit that claims 4, 6 and 7 are patentable by reason of their dependency on a patentable base claim. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

C. Claim 5 stands rejected under 35 U.S.C. § 103(a) for alleged obviousness over Polat et al. and Roenker et al., as asserted above, and further in view of Hongo et al. The Examiner concedes that the combination of Polat et al. and Roenker et al. fails to disclose an error rate curve, but asserts that Hongo et al. supply this deficiency, citing Figure 11 of Hongo et al. to support this assertion.

Applicants traverse these grounds of rejection, including for reasons given above and previously made of record. As applicants have noted above in response to the assertion against instant claim 5 of Teicher and Roenker in view of Hongo, Hongo et al. disclose a chart

showing the relation between the percentage correct responses and the *onset* of masking, which contrasts with the error rate curve charting the representative error rate as presently recited in claim 5, which concerns the relationship between incorrect responses (i.e., errors) and test stimulus exposure *duration*. Notwithstanding this distinction, the applicants respectfully submit that claim 5 is patentable by reason of its dependency on a patentable base claim, as also discussed above.

D. Claim 8 stands rejected under 35 U.S.C. § 103(a) for alleged obviousness over Polat et al., Roenker et al., and Teicher et al., as asserted against claim 7 above, and further in view of Harrison et al. The Examiner concedes that the combination of Polat et al., Roenker et al., and Teicher et al. fails to disclose a response rate curve, but asserts that Harrison et al. remedy this deficiency by allegedly disclosing a graphical user interface and the use of a response rate curve, citing Figure 12 of Harrison et al. to support this allegation.

The rejection is traversed. For reasons discussed in greater detail above, the subject matter encompassed by the instant claim relates to a specific type of response rate curve that is neither taught nor suggested by Harrison et al. alone or in any combination with the other cited documents, namely, a response rate curve that charts response times relative to pre-determined test stimulus exposure durations. Notwithstanding this distinction, the applicants respectfully submit that claim 8 is patentable by reason of its dependency on a patentable base claim, as also discussed above.

E. Claim 25 stands rejected under 35 U.S.C. § 103(a) for alleged obviousness over Polat et al. and Roenker et al., as applied in above, and further in view of Harrison et al. The Examiner concedes that the combination of Polat et al. and Roenker et al. fails to disclose a response rate curve, but asserts that Harrison et al. remedy this deficiency.

Applicants respectfully traverse these grounds for rejection. For reasons discussed in greater detail above, the subject matter encompassed by the instant claim relates to a specific type of response rate curve that is neither taught nor suggested by Harrison et al. alone or in any combination with the other cited documents, namely, a response rate curve that charts

response times relative to pre-determined test stimulus exposure durations. Notwithstanding this distinction, the applicants respectfully submit that claim 25 is patentable by reason of its dependency on a patentable base claim, as also discussed above.

Accordingly and in view of the foregoing, it is respectfully submitted that the application satisfies all requirements for patentability, including the requirements of 35 U.S.C. §103. Reconsideration and withdrawal of the rejections are therefore requested.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are now clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is urged to telephone the applicants' undersigned representative should there remain any unresolved issue concerning this application.

Respectfully submitted,
SEED Intellectual Property Law Group PLLC

/Stephen J. Rosenman/

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